THE VETERINARY RECORD

A Weekly Journal for the Profession.

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Veterinary Appointments.

"Blood is thicker than water," and probably so long as human nature remains a characteristic of man we shall have appointments made by favouritism, and merit displaced by personal considerations. When a person, having the power, places his relative or friend, or it may be his friend's friend, into some post of honour or emolument, it does not always follow that his motives are bad or that his selection is unwise. He may safely plead that he knew of some good traits in the man, who was not a stranger, and that he might have done worse had he appointed one totally unknown to him.

Public bodies are expected to be more above suspicion than individuals. They profess virtue and independence—they pretend to consider claims, and formal committees are instructed to enquire and report. After such formalities the public have a right to expect fairness, and when common sense and decency is outraged the failure is more conspicuously shameful than when committed by an autocrat who promises nothing and consults no one. A 'job' is all the grosser when accompanied by hypocrisy. Our Local Government is daily improving, and the days when shoemakers could be appointed as Sanitary Inspectors, and retired linen drapers as Hackney Carriage Inspectors are fast disappearing. Fitness for an office is seldom altogether ignored in selecting a candidate, but there are offices the technical requirements for which are badly understood.

Medical and hygienic science is an unknown quantity to the small tradesmen who form our local corporations. One doctor is the same to them as another. One veterinary surgeon is identical with the next, and the fact that the term may be used by a man who never studied any science and very seldom practised any art, as well as by the man who toiled through some years of scientific study and passed the test of more than one careful examination, is to our governors quite unintelligible.

Ignorance may excuse them of worse sin. When, however, all this is pointed out to them by one of their number better informed than the rest, ignorance cannot be pleaded, and representative government is disgraced.

Such are our thoughts on reading the account of the doings of the Town Council of Reigate. We are not inspired by anger—merely by pity and contempt.

Esprit de Corps.

What patriotism is to the people of a country, *esprit de corps* is to the members of a profession. The sentiment of the poet expressed in the question—

> **Breathes there a man with soul so dead,**
> **Who ne'er to himself hath said,**
> **This is mine own, my native land?**

carries much the same meaning as the old toast—"Our country, right or wrong." This feeling may be carried too far and result in injustice being done to others, but on the whole it has been beneficient, and to its possessors altogether advantageous. The great Empire of Rome was established by the patriotism of its citizens, and it fell when selfishness superseded love of country. The greater Empire of Britain was founded by the energies and sacrifices of its best and noblest, and it is cemented together now by the sentiments of love of country and pride of race. When such sentiments are weak, freedom and progress are impeded; when they cease nationality is extinguished and decadence has commenced.

What is true of a nation is also truly applicable to small bodies. Every collective body of men be it a family, a society, a regiment, or a profession must be held together, not by rules and charters but by a sentiment of pride and good fellowship, if it desires to maintain its position, and still more if it means to advance. This feeling of pride in the achievments of our friends and comrades, this willingness to sacrifice some individual comfort for the good of the whole body, to contribute of our own store of knowledge or wealth for the furtherance of the general welfare, is the very life of a corporate body. Without this *esprit de corps* a collective body is only a mass without cohesion, the units of which afford little mutual assistance and may in fact be obstructive and detrimental to each other. Far be it from us to say that the veterinary profession has no *esprit de corps*. Willingly do we acknowledge the brotherly love of some, the noble self-sacrifices of a few, and the constant care for our professional honour and position of many. What we do complain of is the utter apathy, the cold indifference, the sordid selfishness of a small minority. This minority is a dead weight on the corporate body—they contribute nothing, neither ideas nor materials. They use the profession for all it is worth to themselves, they share in the practical fruits of the scientific work done by others, and they reap the social advantages of every fresh step attained by collective action, They undersell their rivals, they sneer at their betters; they will assist an attack by outsiders on a brother member, they will apply for a post or office which another man has refused to hold on terms he considered unfair to himself and injurious to the profession; they are never known to acknowledge worth or wisdom in a neighbouring practitioner, and when they are too artful to attempt direct depreciation they "damn with faint praise." A cultivated *esprit de corps* would go a long way to removing all these petty meannesses which do no good to the person guilty of practising them, but do infinite harm to the body of which he is an unworthy member.

CASES AND ARTICLES.

CHOKING AND THE ADVANTAGES OF BELLADONNA IN TREATMENT OF SAME.

By John Meikle, M.R.C.V.S., Larne.

The subject of above was a cow the property of a dairyman of this town, the breed of which it would be almost an impossibility to describe, notwithstanding the protests of the owner as to her having the best of pedigrees—they have all good qualities and pedigrees, I may remark, when critically unwell.

This cow had been in good health up to the 29th December, when she was allowed the privilege of a run in the yard, convenient to the byre. It happened unfortunately that she came across a basket of raw potatoes to which she began helping herself too lavishly, with the result that in bolting the delicacies she contrived to settle one in the cervical region of the œsophagus. For five hours the owner had endeavoured to remove the obstruction without success, and eventually I was sent for, about 6 p.m. to relieve the suffering animal, if possible. On my arrival the cow was down; she appeared to be pretty well exhausted, and in great agony, with an anxious expression of countenance. Water and other fluids were returned through the nose and mouth, and with accompanying periodical attacks of coughing. Pulse 120, weak, irregular, temperature 102 F., with increased respirations, and sweats over the body. The rumen had been punctured without giving the desired relief. The foreign body could be distinctly felt giving rise to an enlargement on the left side, in the region of the œsophagus, around which the tissues and the circular muscular fibres above and below the obstruction were swollen, rigid and unyielding. Without doubt the symptoms were aggravated by unnecessarily rough treatment.

I could see after examining my patient that treatment must be prompt to prove successful, so got the cow into position, passed the probang by ordinary method, taking all the necessary precautions, but found I could not encourage the obstruction to move either by pressure, or gentle tapping combined with external manipulation. Keeping the probang in position, I dissolved three drams of extract of belladonna in glycerine, and compounded a suitable emulsion with warm water; and down the probang I poured the preparation, after removing the stiletto. At the same time I injected with difficulty some of the preparation with a hypodermic syringe on the side of and around the potatoe, so that the drug came into direct contact with the tissues around the exciting cause, and after applying hot cloths to the outside of the swelling I had the satisfaction of seeing the obstruction move on. The cow jumped to her feet within fifteen minutes and partook of some linseed tea. I met the owner a few days afterwards, and happening to enquire about the cow, I elicited the remark that she was "doing rightly."

I am of opinion that the belladonna and the hot water cloths caused the muscular fibres of the œsophagus to relax, and thus favour the passage of the potatoe.

"ON FIRING."

By L. Butters, M.R.C.V.S., Liverpool.

I was much interested in reading your report of the discussion upon firing at the meeting of the C.V.M. Society, and also considerably amused at the difference of opinion upon the matter, and I have ventured to trouble you with a few remarks founded upon my own experience during over 20 years practice, the last 13 of which has been amongst a stud of 3200 horses belonging to the tramway company in this town.

I have now discarded it for nearly everything except curb and thickening of the tendons, and for these I consider it a valuable remedy, always obtaining good results, and removal of a good deal of the swelling. I have found it quite useless in the treatment of thoroughpin and bog spavin, but for these I have found repeated blisters will often remove them, *i.e.* blistering twice a week for four or five weeks, which is easily done after the first or second blister. For sidebones I consider it, as well as blistering, useless, and I quite differ with one speaker, as I find horses invariably go lame from them, and I rigidly exclude all animals showing signs of sidebone or ringbone when examined. I have also noticed that if horses are bought, over five years old, free from them, they are rarely formed afterwards. I have examined about 10,000 horses in the 13 years mentioned, over 8000 of these having been purchased and coming under my observation, and I never come across them in the stud—we are quite free from them. With regard to the effect of firing, I have always considered that in the case of thickened tissue under the skin, as in curb or thickend tendons, the irritation set up causes increased activity in the vessels of the part, leading to absorption of the diseased products.

I never prepare animals for firing or blistering, as I think it is not needed, and have never seen any bad results through not doing so. I have not mentioned splint, as I think it very seldom causes lameness, although often considered to be the cause when the mischief really exists in another part of the limb, generally the foot.

What Professor Penberthy stated in his remarks I practically agree with.

SWINE FEVER REGULATIONS.

Allow me a small space in your columns respecting swine fever, and the way it is being attempted to stamp it out.

(1) Some few weeks ago I was called by an owner of pigs, about three miles from this town, I inspected the animals; one was dead, I at once made a post-mortem examination and found it was affected with swine fever; telegraphed to London, the reply came "please prepare for instructions on following morning." I killed the pig that was diseased, sent inside to London; heard no more about it until some days afterwards I saw the owner of the pigs again, who told me a "travelling inspector" had been from London and ordered all the

healthy pigs to be slaughtered, which was done according to his direction—that was, as I have said before, 3 or 4 days after my report condemning them as being affected with swine fever. The owner said to me, "I don't think he," meaning the inspector, "was a professional man, as he seemed to know so little of pigs or their value." Why is it that the opinion of men who have made the profession their study for so many years is set aside for those who, it appears to me, have scarcely seen a dozen pigs in their lives, let alone knowing anything of any swine disease.

(2) Another case which happened in Warwickshire. Telegraphed to London about pigs affected with fever, received instructions as usual to kill and send inside to Professor Brown. As there were three affected I killed all, thinking I was doing right in stamping out the disease wholesale, four others remained healthy. Again after many days the "travelling inspector" put in appearance, of course, as usual, ordering the others to be killed. The owner at once did it. Why do they not have all pigs slaughtered—both healthy and diseased ones? that is if they wish to stamp out the disease.

(3) About four miles from this town I was called in by an owner of several pigs; two had died, one was ill, telegraphed to London, received instructions as usual which were carried out. On Sunday last received a note from either Prof. Brown or Prof. Duguid asking me to inspect pigs again, as he was not quite satisfied with the appearence of the intestines etc. of pigs sent. I accordingly went, as there had been another died on Saturday night. I again sent the inside to the Veterinary College to Prof. Duguid according to his wish, and a note inside the box asking him if he would kindly inform me of what disease the pig died if it was not swine fever. To my note I received no reply. I consider most uncourteous and unprofessional, I am quite aware that some of the professors have an idea that country practitioners know but little, but let some of them come into the country and see how they will shine. I have been veterinary inspector for over 30 years, and I must say I think I have a little knowledge about pigs and all other domestic animals. I consider that in the way the inspection of pigs is carried out now the disease will never be stamped out. The travelling inspector must and ought to be a qualified man, one who understands all kinds of infectious diseases, and if the animals are to be slaughtered it should be done at once, and not left for days, or I might say until all the others are affected with the same disease. Again I say its no use choosing either "gentlemen" or "clerks" for inspectors or valuers of domestic animals.

A Country Veterinary Inspector.

Tuberculosis in Canada.—Prof. M'Eachran, the veterinary surgeon for the Canadian Government, has for some time been carrying on investigations in regard to tuberculosis in the Dominion. He has placed his views before the Dominion Minister of Agriculture. It is stated that a sum of about £50,000 might be necessary to deal with the disease on the compensation principle.

THE NATIONAL VETERINARY BENEVOLENT AND MUTUAL DEFENCE SOCIETY.

List of Subscriptions Paid in 1893.

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James Clark	0	10	6	A. S. Macqueen	0	10	6
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E. H. Leach	0	10	6	Sir F. Fitzwygram	1	0	0
G. A. Banham	0	10	6	Benevolent Fund			
R. C. Edwards	0	10	6		89	5	6

The Veterinary Mutual Defence Financial Statement, Dec. 31st, 1893.

Cash Received	£	s.	d.
Balance in Bank and in hand Jan. 1st, 1893.	247	15	10
Subscriptions for 1893.	89	5	6
Bank interest, June, 29/- Dec. £2 5s. 11d.	3	14	11
	£340	16	3

Cash Paid	£	s.	d.
Secretary's expenses for Council Meeting	1	1	0
Room at Blackfriars	0	5	0
Paper wrappers, and postal stamps	1	11	5
Cash in bank	334	4	0
Cash in hand	3	14	10
	£340	16	3

Thos. Greaves, *Hon. Treas.*

The Veterinary Benevolent Financial Statement, Dec 31st. 1893.

Cash Received.	£	s.	d.
Balance in Bank, Jan. 1st, 1893.	236	19	3
Sir F. FitzWygram donation	1	0	0
Two dividends, Mersey Docks	50	12	11
Two other dividends, ditto	22	12	5
Two dividends, Manchester Corporation	26	5	5
Cash in Birkenhead Docks	1900	0	0
Cash in Manchester Corporation	900	0	0
Bank interest 2 half years	3	18	2
	£3141	8	2

Cash Paid	£	s.	d.
April 9th, Brown's Orphanage, entered in wrong book	5	0	0
Dec. 31st, Cash in bank	335	8	2
Cash in Birkenhead Docks	1900	0	0
Cash in Manchester Corporation	900	0	0
Cash in hand	1	0	0
	£3141	8	2

Thos. Greaves, *Hon. Treas.*

APPOINTMENT OF A VETERINARY INSPECTOR.

On Jan. 1st a meeting of the Town Council of Reigate was held, when amongst other business brought forward was a report of a committee on the appointment of a Veterinary Inspector for the Boro'. The votes had been equal for two candidates, Messrs. West and Rapley, and the selection was for the Council.

The Mayor explained—

"that in 1881 an Act was passed that all veterinary surgeons should be registered as members of the Royal College of Veterinary Surgeons. It was felt at that time that there were a large number in the country practising as Veterinary Surgeons who had not passed their Examination, and it was allowed that those who had been in practice for five years previously should be allowed to continue to act. In reference to the two gentlemen before them, Mr. Rapley had not passed his examination and was not a member of the College, whereas Mr. West was. He had nothing to say against Mr. Rapley, but he thought it would be a mistake to appoint one who was not a member of the College, and, moreover, he thought the Board of Agriculture, who had to approve of the appointment, would object to it.—Mr. Burtenshaw was surprised that the Mayor should have made these remarks, and contended that Mr. Rapley was eligible.—Mr. Barnes said that, from his own knowledge, Mr. Rapley was well qualified. Mr. West was a great authority on horses, and Mr. Rapley was the best authority on cattle.—Mr. Hunt said Mr. West had admitted to him that he knew more about cattle than horses. It would be a great mistake if they did not appoint him.—Alderman Markham concurred with Councillor Hunt's remarks.—Councillor Apted said they were both equally qualified.—The Mayor: They are not—they are placed in two different classes by the Royal College.—Councillor Sanders thought it would be a slur upon the Council to elect a farrier in preference to a man like Mr. West. He moved that Mr. West be appointed.—Alderman Markham seconded.—Councillor Giles proposed Mr. Rapley.—Councillor Burtenshaw seconded. For Mr. Rapley ten votes, Mr. West nine.

The appointment seems to have given rise locally to a great deal of adverse comment, and is said to have been due not so much to ignorance of the requirements of the office or indifference to the superior claims of a number of qualified resident men as to that curse of local government—political feelings and interests. *The Surrey Leader* makes the following comment:—

It is a strange and striking commentary on the motives of our local senators that actually at their meeting on Monday they appointed, as cattle Inspector, over the heads of highly qualified men, Mr. Rapley, of Reigate, who is not a member of the Royal College of Veterinary Surgeons. Before the passing of the Veterinary Surgeons' Act, in 1881, pig stickers, horse dealers, and the like, acted as veterinory surgeons, but it was provided that those who had been in practice five years continuously prior to the passing of the Act should be registered as "existing practitioners." Mr. Rapley comes under this head, and he was elected (be it remembered by the votes of those popularity-hunting members, Councillors Gilbert and H. R. Gillham—"so-called." Councillor) as cattle inspector for Reigate, under the Contagious Diseases Act. The other applicants for the office were Mr. Robert West, M.R.C.V.S., who has been in practice in Redhill a number of years, Mr. Arthur Blake, M.R.C.V.S., who holds the highest diplomas, and Mr. Dawson, M.R.C.V.S.,—all qualified veterinary surgeons. It seems that though Mr. Rapley may be technically qualified for the post, he has not the professional qualifications of his competitors. The Town Council have done an injustice to themselves, to the Borough, and have cast an unwarranted insult on an honourable profession by their action on Monday night.

An independent resident writes to the local press expressing his disgust at the performance in the

following letter, and it may be hoped the publicity given to the little "job" will effectually prevent a repetition of it.

To the Editor of the "Surrey Leader."

DEAR SIR.—I have resided in our Borough for the last 14 years, and during that period I have not once troubled any newspaper editor, or proprietor, with any complaint or comment respecting the actions of our local Council (no compliment to myself, perhaps). However, I trust nobody will accuse me of a notoriety-seeking, or undue fault-finding spirit, If I, on this occasion, venture to lodge a complaint against our Council on the above subject.

I am informed that last Tuesday a majority of the Council elected an unqualified practitioner (I do not know his name, like many others), as Cattle Inspector for our Borough, although they had before them the applications of three well-known, highly-qualified gentlemen of the profession, men with the most splendid credentials and professional testimonials, which documents also were sent in along with the applications.

Now, Sir, what I want to know is: By what motives were this majority of the Council actuated in thus snubbing not only the three well-qualified gentlemen, but the very profession to which they belong. Is such the reward of years of hard study in a good cause, and a heavy expenditure of money to attain efficiency? To my mind it is simply monstrous that a majority on the Council could be found to accomplish such an unjust act.

Perhaps we may learn the names of this majority.

I am, etc.,

A. MEIER.

WATER IN RELATION TO HEALTH AND DISEASE.*

It is rarely the case that water is suspected of having any concern in the diseases of live stock, especially if from the same pump, or stream, or pond, the supply has been obtained—as it is often urged—for years without inducing violent sickness. Farmers are often heard to complain of their stock falling back in condition, and presenting an unthrifty appearance, notwithstanding an amply supply of wholesome food and the most healthy surroundings; but it is not until some fatal outbreak of enteric fever, or acute blood-poisoning, appears to emphasize the long-abiding mischief, and the veterinary expert enters upon an inquiry, that an explanation is forthcoming. The low standard of health, the lean and stunted growth, which perhaps for years have rendered stock-keeping vexatious and unremunerative, are now seen to have had their origin in the same polluted water which determined the more fatal attack.

The amount of danger attachiug to the pollution of water with organic matter will depend upon—

1. Whether the organic matter is animal or vegetable.
2. The quantity of organic matter present.
3. The activity of the state of putrefaction.

Animal matter is more dangerous than vegetable, and, when in a state of decomposition, may develop putrefactive products as deadly as arsenic.

* An abstract of paper published in the Quarterly Journal of the Royal Agricultural Society.

Mr. Wynter Blyth, in his "Dictionary of Hygiene and Public Health," says: "The bad effects of human sewage on cattle appear to be nil." Such a conclusion, however, is certainly not warranted by our experience. That cattle will, as he observes, grow and fatten on the most sewage-trodden soil" is a fact in the experience of most practical men, but it is equally true that sewage under certain conditions, not only lowers the standard of health, but becomes distinctly poisonous. Moreover, the question has been recently brought forcibly before us as to whether human sewage may not be a means of spreading tuberculosis in our dairy herds.

We cannot draw general conclusions from individual cases, but when we find, as we have done, nine or ten dairy cows suffering from tubercular disease in the course of a year on a farm irrigated with sewage, the idea of sewage as a possible cause of the malady may be reasonably entertained as a starting-point for further inquiry. It would be perfectly true to say that grass grown under the influence of sewage may be, and is, fed to cows for long periods without occasioning impairment of health; but it is quite another thing to aver that human sewage has no ill effects on cattle.

Acute sewage poisoning sometimes proves rapidly fatal, and we have known cattle to die from its effects in a few hours. Where it assumes a chronic form, the disease runs a slow and contracted course, extending over weeks and months. In the former case, the malady develops many of the clinical characters of anthrax; in the latter it is marked by a continuous diarrhœa, often resulting in emaciation and fatal exhaustion.

Action of Plant Life.

In a short but interesting paper by Mr. A. W. Bennett on "Vegetable Growths as Evidence of the Purity and Impurity of Water" the vegetation of running streams is classified under four heads. These comprise—

1. Flowering Plants.	3. Algæ.
2. Fungi.	4. Characeæ.

The importance to be attached to the presence of flowering plants in our ponds and streams is centred in the facts that "the vital phenomena are the same for green water plants as for green land plants," and the process of assimilation is far more energetic in the daytime than that of respiration. They must constantly be giving off oxygen into the surrounding water, and their influence on its purity must be uniformly favourable. "Moreover," says Mr. Bennett, "none of this class of plants are able to withstand the injurious effects of a large amount of fæcal or other pathogenic organic impurities in the water; and their presence, if in a healthy, flourishing condition, must be regarded, not only as beneficial, but as a sign of comparative purity, of the water."

Quite the reverse are the indications of aquatic fungi. Excluding bacteria, the same author remarks: "The number of aquatic fungi is small, and of these the only one which practically comes into consideration in relation to the purity of water supply is the so-called 'sewage fungus,' *Beggiatoa alba.*

Since all fungi which are not parasitic are saprophytic, *i.e.*, derive their nutriment from organic bodies in a state of decomposition, their occurrence is in itself sufficient evidence of the presence, in the water in which they grow, of putrid or decomposing organic substances; and since they do not assimilate in the proper sense of the term,—*i.e.*, do not decompose carbon dioxide and produce carbohydrates or other similar compounds,—they can exercise no purifying influence on the water by the disengagement of oxygen. The appearance presented by the sewage fungus is that of a dirty-looking jelly-like layer, covering the bottom and sides of the watercourse in which it occurs. It is found plentifully in drains which carry off the effluent water of sewage farms, and is especially abundant where the current is slow and the watercourse tortuous. Wherever it occurs it is "an unfailing sign of the presence in the water of a large quantity of deleterious decomposing organic compounds." Microscopically examined, it is found to consist of delicate soft filaments interlacing each other in all directions.

The Algæ of our ponds and streams form a large and interesting group of aquatic plants, several of which would appear to exercise a marked influence on the purity or impurity of water, and by their presence to indicate in some degree the extent of its organic contamination. Algæ are best known to the ordinary observer in that form termed "blanket weed." This, however, is the only one of numerous examples which abound in our rivers and ponds.

The higher algæ consist of closely packed masses of long green mossy filaments, which form a broad sheet upon and beneath the surface of the water. Others are much simpler in their organisation, and very minute, so much so that the entire plant may consist of a single cell only, of microscopic dimensions. Between these two extremes of development there are intermediate forms of great variety. These plants Mr. Bennett classifies under the heads—1. Blue-green algæ. 2. Chloryphyll-green algæ. Of the former he remarks: "The amount of oxygen which they give off into the water is exceedingly small, and they can exercise no appreciable purifying influence; while in their decay they frequently give out noxious and fœtid gases, and the presence in the water of any considerable quantity should be regarded as rendering it unfit for domestic purposes. Of the chlorophyll-green algæ the family *Conjugatæ* are extremely sensitive to organic impurities of a putrescent character; they rapidly perish in water that is not well charged with oxygen, and when found in any quantity, or, at all events, if occurring in the reproductive condition, it may be taken as certain evidence that the water contains no considerable quantity of deleterious organic ingredients. They give off into the water an appreciable amount of oxygen, and thus contribute to purify it." A striking illustration of the purifying influence of plant life on water arose, quite accidentally, some years ago in India, when all aquatic plants were removed from the water tanks. As a consequence of this the water, which before was good and wholesome, became unfit for use. Other species of algæ, especially "blanket weed," also give out a considerable amount of oxygen to the water in which they grow; but when they exist in large amount, and undergo disintegration and decay, these algæ—harmless though they be during life—may prove a source of dangerous pollution after death.

It is recorded by Mr. Francis, of Adelaide, that in 1878 the lakes which form the estuary of the Murray contained a Conferva in such quantities as to render the water poisonous to farm animals. He believed it to be the *Nodularis spumigera*, a plant allied to *Protococcus*. It forms a thick scum, like green paint, some two to six inches thick, and as pasty as porridge; it is swallowed by cattle when drinking, especially such as suck their drink from the surface like horses. On being ingested it acts poisonously, and rapidly causes death.

The symptoms caused by it were stupor and unconsciousness, the animals falling and remaining just as if asleep, unless touched, when convulsions came on, and the head and neck were drawn back by rigid spasm. Death took place in the case of sheep in from one to eight hours, in horses in from eight to twenty-four hours; dogs succumbed in from four to five hours, and pigs in from three to four. In a sheep to which thirty ounces of the fresh scum was given death resulted in fifteen hours. On a post-mortem examination being made, all the scum was found to have been absorbed. The abdominal cavity contained two pints of yellow serum. The heart was flabby, and had around it a considerable amount of effused serum. The lungs, liver, and substance of the brain were healthy, but the outer membrane of the brain (the *dura mater*) was congested. Blood throughout the veins and arteries, and in the cavities of the heart, was black and uncoagulable, neither did it become scarlet on exposure to the air. Many sheep that died on being opened presented the same appearances, all being without any signs of the plant in the stomach. This, says Mr. Francis, shows that it is rapidly absorbed into the circulation, where it must act as a ferment and cause disorganisation. When the scum is left in wet pools and puddles it rapidly decomposes, giving off a most horrid stench, like putrid urine, or archil in process of manufacture; but previous to its getting into that state it emits the smell of butyric acid, like very rancid butter.

Pollution of Rivers.

Nearly every mining and manufacturing process gives rise to an effluent refuse more or less deleterious to life. The existence of some of these forms of refuse is made known by the peculiar discoloration of the water into which they flow. Some rivers of Yorkshire are turned blue and various other hues by the effluent refuse of cloth works; those of Cornwall are reddened by the copperas washings of the tin-plate manufactories, or turned white by impregnation with china clay; while in the coal-bearing districts they are blackened by the effluent from coal washing.

Outward and visible signs, however, are not always available to make known the presence of poisonous and deleterious substances which enter our waterways, and in such cases it is only by actual experience of their effects on living things that their

presence becomes known to the farmer. The absence of fish where once they were abundant, the disappearance of aquatic plants from the river and its bank, are significant facts in river sanitation, if not absolute proof of dangerous pollution.

The Rivers Pollution Commission established the fact that, of all forms of industry, lead mining is the one which has most seriously affected animal health. In Cornwall and Wales, where it is most extensively carried on, not only were fish poisoned in the polluted streams, but many cases of disease and death in cattle and horses, as well as in poultry, were adduced by farmers whose stock were pastured on the river banks. Lead mines yield lead mostly as galena (sulphide of lead), mingled with large quantities of various kinds of rock. The operation of extracting the ore consists of crushing and washing it, when the rocky matters with more or less finely powdered ore are carried away into the rivers, leaving behind the greater part of the heavier sulphide. In the form of galena lead is not so destructive as when it exists as carbonate of lead. Small quantities of the latter are sometimes met with in mines, and as it cannot be profitably separated, it is allowed to escape with the washings, and is no doubt responsible for much of the injury resulting to stock from lead pollution of mining rivers. Disease resulting from the ingestion of this poison usually assumes a chronic form, and the symptoms it induces are very characteristic. Loss of condition and an unthrifty appearance are the first indications of ill health; then follow stiffness of the limbs, with a desire to lie down, and a dull, lowering expression. The bowels are constipated and the fæces black. Soon the joints or the sinews, or both, become swollen and painful, and lameness in one, two, or all the limbs appears, and the body becomes tucked up and the back arched and rigid. Paralysis more or less complete, colic, and—in acute cases—frenzy are sometimes present. In protracted cases the bones of the head and extremities are enlarged and soft. Pregnant animals abort and cows and mares repeatedly miss service as the result of lead sickness.

In the process of sugar-refining rivers are dangerously contaminated with the washings of bags used in the filtration of sugar. The drainage which escapes from these works is said to be 100 times more potent than its own weight of sewage in rendering running water foul and useless. A single refinery, it has been affirmed, "must utterly ruin any stream of moderate dimensions into which its filter washings are allowed to flow in an unpurified condition." The befouling effect of this matter is strikingly evidenced by the vast quantity of "stinking, stringy, fungoid growth" which covers the beds of the streams into which it is discharged.

Linen and jute works also contribute to befoul in a dangerous degree some rivers of the North. The waste liquor resulting from the boiling processes resorted to in the preparation of flax contains a considerable amounts of putrescible organic matter.

Starch factories also give rise to dangerous organic pollution of the streams beside which they are situated. The refuse discharged from them is said by competent authorities to have a polluting power ten times as great as ordinary town sewage.

The outpourings from clothworks, tanneries, paper factories, and other mills and works where organic matter is dealt with, add considerably to the deterioration of our streams as sources of water for the live stock of the farm.

While we write we are consulted in reference to sickness and mortality in a stud of horses in Herts. In this case it had been found necessary to hold the water up in the river Colne above a drinking place, in order to allow of drains being put under its bed. Two breweries and a fellmonger threw their refuse into the stream above, where it had for some time been allowed to stagnate, and on being let off, not only were "cartloads" of fish destroyed, but several horses suffered severe diarrhœa, and one died.

Pollution of Drains.

The capability of anthrax organisms to live in our watercourses, and still retain their virulence, has been established as a scientific certainty by Deatroptoff. This observer succeeded in demonstrating the existence of anthrax bacilli in the mud taken from the bottom of a well near Odessa. It appears that an epizootic of anthrax broke out on land where numerous flocks of sheep were pastured; several of the dead sheep were buried, and the others removed to another pen some kilometres distant, having a special watering pond. The infected pen was carefully disinfected, and the walls being washed with sublimate, the earth was raised to a depth of 25 centimetres, and replaced by fresh soil. On their return to the disinfected pen the sheep, which had been perfectly well in the second pen, again began to be attacked by anthrax. A new change, with a second disinfection, was followed by a recurrence of the disease on the return of the sheep to the former pen. The proprietor at last noticed that the epizootic only recommenced when the water of this well was used—water avoided by the farm people on account of its brackish taste. When the well was filled up the epidemic ceased. The bacteriological examination of the water itself and the inoculation of mice therewith gave negative results. The author sent for some of the soil of the pen, and of the mud at the bottom of the well from which the suspected water had been taken. No anthrax bacilli were found in the soil of the pen, but from the mud of the well bacilli were obtained which killed rabbits and mice, their bodies presenting the post-mortem appearances of anthrax.

Moreover, cultures made from their blood left no doubt as to the nature of these bacilli. Not only are these organisms capable of living in the mud of our watercourses and receptables, but they are also able to retain their vitality for weeks in farmyard manure. This latter fact has been demonstrated again and again in our own experience, and never more clearly than in the outbreak of anthrax recorded by the writer in the Society's Journal, 1874. The disease in this case broke out on a farm in the occupation of Mr. Darby, of Stoke-under-Ham. It first appeared in some sheep, which led to the infection of a pasture adjoining the farmstead. A horse turned into this

enclosure became sick and died, and was opened in the crew-yard, the manure of which became saturated with blood from the infected animal. This event was succeeded by several weeks of dry weather, during which no extension of the disease took place; but the next heavy rainfall had the effect of washing out the virus from the manure into an adjoining pond, with the result that eight horses, after drinking water therefrom, succumbed to anthrax. As manure heaps are frequently deposited near to drains bounding enclosures, it is not difficult to understand how infection may be conveyed from the farmstead to distant watercourses to start new centres of disease, the origin of which is seldom suspected.

In connection with the pollution of streams it is interesting to notice that water may be poisonous in one part of a stream and not in another, as when sewage contaminated water moving from the source of pollution becomes diluted by fresh influxes of water from land drains and other sources. In these cases the outbreak of disease is localised as a point immediately below the intake of the polluting matter. Although the influx of sewage or other hurtful matters may continue the same, the danger to live stock will vary very considerably from time to time. This will depend upon the volume and rapidity of the current. In wet seasons, when the former is considerable, the offensive matter is carried away by the flood, and becomes much less potent for evil than in hot dry weather when water is low, the current slow in its movement, and putrefaction is actively going on.

Pollution of Ponds.

The larvæ or young of some of the most destructive parasites take up their abode in the mud and organic filth in which ill-kept ponds abound.

The blood-sucking *Strongylus contortus*, a parasite which causes immense losses in our lamb flocks, as well as other nematode worms, revel in the dirt of our ponds, in slow-running streams, and swampy places.

How they get there will be understood when it is remembered that our farm animals frequently deposit their excrement, and with it the eggs or embryos of various parasites, in and about the water in which they drink. That these organisms subsequently find their way into the bodies of other animals is in a great measure due to the fact that stock are usually permitted to walk into ponds for some distance to procure their water, and in doing so the mud and parasites it contains are stirred up and swallowed in the act of drinking.

The remedies against parasitic infection of pond water can never in all cases be complete, but by providing a proper slope and laying brick earth or some other such matter at their entrance, and fencing them across so as to prevent stock from going into them, some degree of security might thus be insured. Where these provisions are not obtainable, thorough cleansing at every favourable opportunity should be resorted to. This leads us to remark that mud removed from ponds should not be used for dressing pasture land immediately, but should be thoroughly mixed with lime and allowed to stand in a heap for two or three months, when it may be used for arable land or high-land dressing, but on no account should it be applied to damp or swampy meadows. It is only recently that we were consulted as to a serious outbreak of parasitic disease among lambs, following upon the dressing of some park land with mud removed from an adjoining pond.

Pollution of Tanks and Troughs.

Where water is stored in tanks it should be guarded against pollution by a well-fitting cover. In stables and farmsteads rats and mice are seldom absent, and it is no uncommon thing to find their decomposing remains in unprotected tanks. Moreover in large towns, where glanders prevails, suspicion of spreading the disease has on several occasions fallen upon water exposed to contamination in infected stables.

It will readily be granted that no notice of water pollution in connection with farm animals would be complete without reference to water-troughs. Water troughs in yards, especially where they are set low, frequently become charged with animal excrement, besides containing an occasional rat or chicken, or some other animal remains. It does not follow that any perceptible sickness may arise as the result of taking water from such a source as long as the putrid mass remains undisturbed, and a plentiful supply of water is kept in the tank. Serious and fatal sickness, however, results from time to time where this order is reversed, and especially if, by long fasting, young stock are tempted to drink freely of the putrid deposit.

J. Wortley Axe.

Obituary.

THE LATE MR P. D. COGHILL.

A correspondent writes:—"Many would notice with regret the announcement of the death of Mr. P. D. Coghill, Superintendent of the Research Laboratory at the Royal Veterinary College, Camden Town, London. He had been ill for some weeks, and ultimately succumbed to erysipelas and pneumonia, following an attack of influenza. Mr. P. D. Coghill was born in Edinburgh on the 15th November 1853, and was left fatherless at the age of thirteen. He served his apprenticeship as a clothier, but relinquished this work to take up the position of traveller for a large indiarubber manufacturer, and he made for himself a good position. During the greater part of this time (about seventeen years) he was a most enthusiastic volunteer. With his scientific turn of mind he naturally turned to the artillery service, and, as all who came in contact with him during this period know, he entered heart and soul into the work of the M.C.V.A. An old colleague says of him:—"His Volunteer career was one long series of successes; as regards shooting, repository work, and signalling, very few, if any, could show an equal record. His detachment was the first to win the coveted aggregate prize and badges when it was first instituted at the Barry Camp, the Scottish National Artillery Association even allowing him the privilege of choosing the design for the same. He initiated and established army signalling in the Mid-Lothian Artillery Volunteers in 1884, his detachment carrying off the greatest number of prizes, and in 1885 he won them all. He set before himself the work of bringing repository work amongst the men of his corps up to something like

perfection, an ambition in which those who have followed the advance of repository drill in Scotland are aware he was successful. In 1886 the detachment carried off the first prize for repository work at Barry, beating the Woolwich (3rd Kent) and 2nd Durham teams, which at that time were considered the crack detachments and not easy to beat, even at Shoeburyness. The M.A.V. brigade repository prize invariably fell to his detachment, and all were of opinion that Coghill's skill and ability were mainly, if not entirely, instrumental in bringing the repository work to such a state of perfection as it attained at that time. He was equally successful in gun shooting and carbine work. When the laboratories of the College of Physicians of Edinburgh were opened, Mr. Coghill was appointed first assistant, and his energy, mechanical skill, and scientific ability were again called into play in helping to organise and carry on the work of the department. Dr. Batty Tuke, the curator, Dr. Woodhead, the superintendent and the workers in the laboratories and many of the Fellows of the College, have all expressed themselves as greatly indebted to him for the energy and faithfulness with which he performed his work, and made the interest of the laboratory his own. So successful was Mr. Coghill here, and so highly skilled did he become, not only in routine laboratory work, but also in histological and photographic technique, that when Principal Brown, of the Royal Veterinary College, Camden Town, required a superintendent for the new Research Laboratory endowed by the Royal Agricultural Society, Mr. Coghill was at once selected as the man best qualified to undertake the work. In London he made many friends by the enthusiastic way in which he carried on his scientific work. His work in microphotography was amongst the best of its kind, and his knowledge of technique in histological and pathological work —and even of the more complicated pathological structures, especially in animals—was simply marvellous, considering that he had taken up this kind of work at so comparatively late a period in his life. Mr. Coghill leaves a widow, a son, and one daughter.—*The Scotsman.*

VETERINARY SOCIETIES.

THE CENTRAL VETERINARY MEDICAL SOCIETY.

The usual monthly meeting of the Society was held on Thursday night the 4th inst. at the Royal College of Veterinary Surgeons 10 Red Lion Square, Mr. A. Prudames, the President, occupied the chair, and the other Fellows present were Messrs. J. K. Bruce, A. L. Butters, H. W. Caton, Col. F. Duck, A.V.D., Henry Edgar, T. C. Garry, A. E. Gostling, Professor Hobday, J. Sutcliffe Hurndall, Prof. Macqueen, F. C. Mahon, W. J. Mulvey, Prof. W. Pritchard, J. E. Rickards, H. G. Rogers, A. Rogerson, J. Rowe, Hugh Singleton, W. Stapley, F. W. Wragg; also the following visitors: Messrs. C. G. Cockrane of Moscow, C. H. Cordy, Percy Earle, R. Aitkenhead, Morgan Evans, Harold A. Idenden.

On the motion of Mr. F. W. WRAGG, seconded by Mr. J. S. HURNDALL, the minutes of the preceding meeting were taken as read, and were signed by the Chairman.

CORRESPONDENCE.

The HON. SECRETARY (Mr. F. C. Mahon) stated that he had received a letter from Mr. J. Roalfe Cox expressing regret at his inability to attend, also a communication from Prof. T. Walley, Edinburgh, saying he should not be able to be in London until the 5th or 6th inst. There was also a telegram from Mr. S. Villar intimating that he was detained and unable to be present at the meeting. Dr. G. Fleming, C.B., wrote from the Constitutional Club:—"Please convey to the president and members of the Central Veterinary Medical Society my thanks for the honour they conferred upon me by electing me a Honorary Fellow of the Society. It is an honour I very much appreciate.

ELECTION OF A FELLOW.

A ballot resulted in the unanimous election as a Fellow of the Society of Mr. F. Smith, M.R.C.V.S., Lewisham Road, S.E.

NOMINATIONS.

A paper was handed in nominating as a Fellow Mr. J. E. Kitchen, M.R.C.V.S., Manor Lodge, High Road, Upper Clapton. His nominators were: Mr. J. S. Hurndall, Mr. F. W. Wragg, and Mr. F. C. Mahon.

PATHOLOGICAL SPECIMENS.

Mr. H. EDGAR then exhibited a post-mortem specimen from a dog, which consisted of a cystic calculus *in situ*, and two fatty tumours attached to the uterus, one of which had passed through the abdominal muscular wall. He said that this pathological specimen was of much interest to him and he thought it might prove of equal interest to the members of that Society. He knew very little of the history of the case. The little fox terrier bitch was brought to him by a coachman to be destroyed. The coachman said the bitch was becoming a great nuisance as she was constantly micturating, and had done this a dozen or more times in the course of a distance of less than half a mile, otherwise she was in good condition. On examining before destroying her Mr. Edgar found a tumour immediately under the last teat but one. He concluded that this was an ordinary mammary tumour, but on dissecting it he found it to be a fatty tumour, protruding through the abdominal muscular wall about the size of a large chestnut, with nearly as much internally. There was another fatty tumour attached to the uterus. The stone in the bladder weighed four drams and occupied the whole space of the bladder. It seemed marvellous that no symptoms should have been noticed, and that the animal did not exhibit signs of pain, seeing that the bladder was absolutely filled by the stone.

The CHAIRMAN: Do you think that the tumours were formed within the abdomen and passed through, or were formed outside.

Mr. EDGAR: I fail to see why there should be the opening. Why should one part be inside and another part out, and it glided to and fro very easily. There is a kind of skin forming through the fatty tumour. I cut through that. Of course there must have been some cause to make the hole, there is no doubt about that.

Mr. T. C. GARRY next exhibited two bones—the radius and ulna—of the off fore leg of a St. Bernard bitch, which were affected with septic osteo-myelitis. The bitch had probably died from pyæmia, but he had had no opportunity of making a post-mortem examination. The limb was merely sent to him for his investigation. His advice was only sought a day or two before the bitch died. The only history of the case he learnt was this: Six weeks ago the bitch, previously in the best of health, returned home lame and with a swelling of the fetlock. After a week's fomentation, although swelling was still present, the animal could use the limb. She, however, became suddenly lame again and so remained until she died. At no time was there any considerable pain on pressure. There was no external wound until a week before death, when an abscess was opened. On dissecting the limb a quantity of very fœtid dark pus exuded, and the tissues beneath the skin were found to be gangrenous as high as the elbow. Considerable swelling was apparent both above and below the fetlock. The peculiarity of the case seemed to him to be that there was no external wound at all and no history of any frac-

ture or anything of the kind. Dr. Yeo, in his pathology, spoke of acute infective periostitis happening without injury, and he (Mr. Garry) supposed that the appearances in the present instances might have been due to blood contamination; suppuration beneath the periosteum and in the medulla producing thrombosis of the vessels and consequent total neurosis of the bone by arrest of nutrition. There had evidently been an attempt to enclose the affected area by the production of new bony tissue.

The CHAIRMAN: I understand you to say, Mr. Garry, you did not see or examine the bitch during life, nor until you made the post-mortem examination, and you could not positively say there was not a small punctured wound originally.

Mr. GARRY: No, I could not positively say so.

PROF. PRITCHARD ON "FIRING."

RESUMED DISCUSSION.

THE CHAIRMAN after expressing regret at the absence of Mr. Hunting and Prof. Shave (who respectively moved and seconded the adjournment of the discussion at the last meeting on Dec. 7th, 1893) said:—Without interfering with the vote of thanks which I doubt not you, gentlemen, will in due time accord to Prof. Pritchard, I feel constrained to tender my personal thanks to him for his able and interesting address, and to you, gentlemen, for the manner in which the discussion upon it has been carried on. That Prof. Pritchard's address was an able one I think all will admit, and that it deals with an interesting subject is shewn by the number of speakers. All of them, even Mr. Hunting, agree that firing is in many cases useful and necessary. Its mode of action has not been quite clearly defined by any speaker, but that view of it explained by Professor Penberthy comes nearest the theory I think most feasible. Although it is not my own theory yet it commends itself to my mind. I will endeavour to explain it. All new and adventitious growths although they may be furnished with nerves and bloods-vessels possess a low degree of vitality; the action of a strong counter-irritant by diverting the blood supply robs the new structure of its supply of nourishment, weakens or destroys its power to exist; once its growth has been checked it is in a fit state to be taken up by the leucocytes which have been brought thither in abundance by the action of the counter-irritant. Does this account for the more potent and lasting effects of firing than of other counter-irritants? Further, if this theory be correct it follows that firing with the view of strengthening a part is useless and therefore cruel. As a rule I do not find it necessary to prepare our class of patients before operating, but occasionally one meets with exceptions. I was much surprised to hear Prof. Pritchard suggest keeping the animal tied up from 10 to 12 days after the operation. Personally I have always found 3 or 4 days quite sufficient, I never came across a case of sloughing to any serious extent. While I approve of light firing, I prefer it deep and at intervals when treating bony exostoses. I would like to ask Prof. Pritchard whether he thinks the administration of chloroform necessary and advisable, as he does not mention this much debated point.

Mr. H. W. CATON remarked that Professor Pritchard's interesting address on firing deserved discussing from every point of view. For some years past he (Mr. Caton) had not been able to convince himself of the utility of firing. He thought its effect was questionable. That they derived beneficial results after firing he admitted, but it was just a question as to whether these results were not brought about by time and rest. He certainly expected to have heard more about the physiology from their worthy professor. Professor Pritchard, however, did not enter upon that subject very largely. Several theories had been propounded as to the action of firing, and he (Mr. Caton) had an opinion of his own on this subject. He fired because it was customary to fire, and his belief was that if it acted at all beneficially it did so in serving to bring about a permanent bandage. Professor Macqueen seemed to speak of the operation as producing the absorption of any deposition. On the other hand, other speakers thought that deposition took place and thereby strengthened the part. As to whether they should 'feather fire' or 'point fire,' he considered that a good deal depended upon the nature of the particular disease for which they were treating any animal. He believed that Mr. Edgar expressed disapproval of firing for side bone. He (Mr. Caton) went on to say that he believed sidebones caused much lameness in many instances according to the situation and structures involved, and the best operation he knew of in such cases was Professor Smith's operation for sidebone Where the enlargement was considerable he did not think anything was useful. He was old fashioned enough to believe that a little rest and a dose of physic to an animal in full active body, was beneficial. He liked to give animals three days rest before firing. A cart horse fed on straw and mangold did not want much preparation. With respect to the depth at which they fired, he thought that depended upon the disease for which they were operating. As to width, that he regarded as a matter of fancy. Concerning the colour of the line, that was a point to which he did not attach much importance. He regarded the thermo-cautery as unquestionably a most useful instrument for thoroughbred horses, and in order to fire lightly and prettily. In firing cart-horses, however, he doubted whether the thermo-cautery would be advantageous. He thought the price of the thermo-cautery was excessive, if not prohibitive in many cases. In relation to firing for sandcrack there seemed to be a difference of opinion between Professor Pritchard and Prof. Macqueen. The latter spoke of firing parallel for sandcrack but he (Mr. Caton) did not see wherein this advantage quite lay. He believed in firing across and preventing the crack from affecting the new horn that was forming. If they could get through it, it was well to do so taking the bearing off the bottom. Then as to fastening up after firing, he certainly confessed that he did not see the necessity of keeping a horse tied up after the fourth or fifth day if they could get a good cradle upon him. He thought it was more beneficial to allow the horse to have his head and exercise than to tie him up. He had never seen any evil result from allowing a horse to go after the fourth or fifth day. He understood Mr. Edgar to say that he had never witnessed any beneficial or satisfactory effect derived from firing a horse with sprained tendons, and Mr. Barrett, he thought, confirmed that. Mr. Caton, however, was of opinion that if firing was any good at all, sprained tendons were the very disease to which it should be applied. In such cases he thought firing was of great importance but, of course, there was just a possibility that the great curative agent was after all, the long rest the animal got. Mr. Edgar advocated firing for thorough-pin, and in these cases preferred firing to blistering. It might be incorrect treatment, but when he had a big thorough-pin to deal with he generally physicked the animal and then fired him with a small Pyro-Puncture Iron. He thought that must be advantageous as he had had some very good results, and certainly until he saw some better mode of treatment he should pursue the course he had hitherto adopted. As to point firing for sidebone he was of opinion that where the sidebone was small and first forming this might be of some benefit, but otherwise he inclined to the belief that they must fire deeply if any advantage at all was to be derived. He believed in penetrating the coronary band, firing right through, and thereby giving the foot some room to expand. Mr. Edgar

said that fibrous tumours had received some benefit from firing, but he (Mr. Caton) failed to see how in these cases firing could act. Fibrous tumours might be absorbed by the constant application of cold water and removing pressure from the parts; and in the case of fibrous tumours disconnected to a certain degree the quicker remedy seemed to him to be the use of the knife. Mr. Barrett spoke about splints, and firing horses as soon as they came from work, and so on. He thought that in the case of splints the same general rule was beneficial as in other cases, and that the horse should be cooled down before firing; that this was beneficial. He was credited with having spoken at the last meeting and with mentioning this but the speaker was, he believed, Mr. Samson. It was Mr. Samson and not he (Mr. Caton) who referred to splints. He believed in the efficacy of deep firing in cases of bony deposits. Mr. Samson, and not himself again, spoke of firing splint without causing any blemish. Personally he (Mr. Caton) failed to see how with point firing they could fail to blemish materially and with line firing still more. Colonel Duck mentioned needle firing and he (Mr. Caton) thought it was to be regretted that they did not hear more from that gentleman on this subject. He should have liked to have heard to what cases Colonel Duck considered such firing most applicable. Colonel Duck had spoken of its application to hunters which had been cast aside as wholly useless and which, after the operation, had been rendered serviceable for several seasons afterwards. If any benefit was to be derived from needle firing he (Mr. Caton) thought they should adopt it. They should know more about it and there was no gentleman more fit to impart this information than Colonel Duck. Was it desirable to needle fire only one or both limbs? Perhaps it would be more efficacious to fire the two.

(To be continued)

EXTRACTS AND NOTES.

VETERINARY-CAPTAIN FENTON'S "HORSE FLOAT"

Through the kindness of Colonel W. Cooke, Commissary General, Bangalore District, and Veterinary-Captain G. H. Fenton, we were enabled this morning to inspect the "Horse Float," which is the invention of the latter officer.

The "Float" is one intended to be used in Madras, by the Society for the Prevention of Cruelty to Animals. It is fixed on two wheels (Royal Artillery pattern) and is drawn by bullocks. The front and rear ends of the Float are doors, hinged at the base, which are let down during the operations of shipping and unshipping the animal, and form gently-sloping platforms. They are cleated to prevent slipping. To give steadiness to the vehicle during these operations adjustible iron legs or props, are fixed at the corners, outside. The inside of the box is fitted with everything likely to be required—padded breast and breech straps, slings, side-paddings, &c. The Float is a capital adaptation of means to the desired end. We ought to mention that the arrangement of the draught is good; a chain is attached to the yoke and passes thence to the bottom of the front of the carriage, thus relieving the pole, the base of which is fixed into a box in the centre of the front "door" of the vehicle.

The invention is intended we understand for army use. Plans, &c. of it, were some time since sent to the Commander-in-Chief in India, who heartily approved of the invention; only financial considerations precluded the introduction of it into the Budget. It will, we have no doubt, find its way soon into the army estimates, for it will prove of great value. In every large city and garrison, there ought to be at least one of these "Floats." To get an injured animal speedily and with as little pain as possible out of the streets is surely most humane and in every way desirable; Madras has therefore done well in securing a Float. We should think that the Australian horse-shipping firms, and stable companies in Madras, would find it to their advantage to keep one of these useful vehicles. Sometimes they must need such a conveyance to remove a sick or exhausted horse from the landing place to a place where he can recover his strength—for which Veterinary Captain Fenton's Float is admirably adapted.—*The Bangalore Spectator, Dec. 12th, 1893.*

THE PRESENT EXAMINATION SYSTEM.

By John Struthers, M.D., LL.D.,

Emeritus Professor of Anatomy in the University of Aberdeen.

The large and increasing proportion of rejections is at last attracting attention. When we reflect on the fact that rejections have run up to some 30 per cent. of the examined—twice what the proportion was twenty years ago, three times what is was thirty years ago—it goes without saying that there is something wrong in the present system of examination, or in the teaching, or in their relation to each other. It is not the student's blame. He is not less industrious than when I knew him twenty, thirty, or fifty years ago. The views of one who has had experience in teaching and in examining, and who is free to speak, may perhaps be of some use at the present time.

I believe that the present system of examination fails seriously to secure the desired results, and that it is injurious to good medical education. The education is the main thing, but the education is regulated by the examinations, more and more so as these are multiplied. Using the word "cramming" deliberately, I hold that the present examination system leads to and rewards cramming; that it does so (*a*) by the multiplication of examinations, and (*b*) by wrong method at the examination.

(*a*) I am not here suggesting any departure from the general recommendation by the General Medical Council, and adopted by the various examining bodies, and there should, in the new five-year course, be four examinations. The evil lies in the Boards having allowed subdivision of these four examinations, and in intervals between the four examinations not having been prescribed. The result is that the candidates may take the examinations bit by bit, one subject at a time, for which he crams.

The evil of the bit-by-bit system comes out most manifestly in the examination in medicine, surgery,

and midwifery being allowed to be taken in three parts at different times. Of what real value is the kind of surgical or medical or obstetric knowledge that the candidate could not carry in his head or prove with his hands beyond the three or the six or more months that may intervene between the first, the second, and the third bits of the examination? It is the examination for the general practitioner, and the aim of the examination should be to test the man's whole fitness to practise his profession. The permission to take the preliminary examination bit by bit led to such abuse that we had to put a summary stop to it and require the whole to be passed at one time. The four examinations already give as much subdivision to the professional examination as ought to be allowed. I would say they are one too many unless the fourth is to be strictly clinical. It belongs to the schools to see that their students take the classes in the proper order, and to each teacher to see that his students are working. The object in the examinations held by a licensing board should be to test, not what the student can cram, but, after due time allowed for study, to test what he has retained.

(*b*) Still more injurious to education and futile in results I hold to be the present method of conducting the examinations. Far too much importance is attached to the written part. What we wish is real knowledge, not merely word knowledge. Written examination, so far as I could learn, is not employed in medical examinations in France or in Germany, and is of comparatively modern use in this country. It has grown vastly at some boards, and much might be said as to its baneful antecedent influence on the teaching. Long experience in teaching and in examining at various boards has taught me to attach little weight to written examination. It has the seductive recommendation of saving the time of the examiners. I would continue it for that purpose in a different sense, using it as eliminatory in cases in which it affords abundant evidence that it would be a waste of the time of the examiners to send the candidate on to the oral examination. The practice of taking a mean, allowing good marks for the paper to make up for bad marks at the oral and practical, ought to cease. The pass-mark should be required to be reached at the oral and practical part or parts.

But what I desire to insist on most of all is, that the so-called oral examination ought to be more demonstrative or practical, and have more time allowed for it than is customary at nearly all the boards. The modern oral examinations appear to be suffering from the same incompatibilities as the modern teaching. Under the influence of the modern wave, the demand for real instead of word knowledge, there have been added so-called practical classes (some of them not very practical), but without abatement to the over lecturing. The student is pulled about from class to class in distraction, but, on the whole, finds his safety in looking to the old. So, in the oral examinations, there has been the introduction of the objective and the practical to some extent here and there, sometimes real, sometimes only in appearance, but the new wine has not been in quantity sufficient to burst the old bottles. Examiners trained in the old way go on mainly in the old way, and, still more disappointing, the young examiner too, fresh from the cramming school, takes the talking way. What I plead for is an entire reform in method at the oral examinations, for what may be called the laboratary and bedside method all round, and for ample time to be given to it.

Our aim in regard to education should be to promote practical study in all the branches, training the rising youth to observe Nature for themselves, Nature in the laboratories, the dissecting room, the post-mortem room, and at the bedside, and to cultivate the open mind for progress, that is sure to be made in our ever-advancing sciences and art. Our aim in regard to the indispensable evil of examinations should be to test such knowledge.—*British Medical Journal*.

CORRESPONDENCE.

VETERINARY INSPECTORS.

SIR,

Suppose a registered veterinary practitioner (sine diploma) is appointed by a local authority, would the Privy Council in London, accept such an appointment? I refer to an Inspectorship, Contagious Diseases (Animals) Act. Perhaps you or one of you correspondents would be kind enough to answer this question and oblige.—Yours faithfully,

ONE OF MANY.

[The Contagious Diseases (Animals) Act of 1878 defines a "Veterinary Inspector" as "an inspector being a member of the Royal College of Veterinary Surgeons or any veterinary practitioner qualified as approved by the Privy Council."

The Animals Order of 1886, Article 173 states what the qualifications are which the Board of Agriculture may approve—"The following is hereby approved as the qualification of a veterinary practitioner (not being a M.R.C.V.S. and not holding the Highland and Agricultural Society's Certificate) to be a veterinary inspector of a Local Authority in England or Wales or Scotland, namely—that he is registered as an existing practitioner under Section 15 of The Veterinary Surgeons Act 1881."

There is one more qualification under which a man may retain his position as a veterinary inspector, but it would probably not be accepted by the Board of Agriculture as warranting a new appointment, viz: "that he was appointed previous to the 10th of March 1883 by that Local Authority as an Inspector or Veterinary Adviser under The Contagious Diseases (Animals) Act of 1869.

There is a a further requirement as to the appointment of veterinary inspectors in Article 177 of the Animals Order of 1886—"whenever a Veterinary Inspector or an Inspector is appointed under Section 42 of the Act of 1878 or there is any change in the name and address or district of a Veterinary Inspector, the Local Authority shall forthwith report the same to the Privy Council (Board of Agriculture).—Ed.]

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Messrs. T. Hibbard, H. Blunt, J. L. Hamilton, H. Jarvis, G. E. Nash, T. Greaves, L. Butters, "The Scotsman."

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